

Business Cluster as a Network of Relationships: An Empirical Study of Russian Industrial Sector

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Abstract

The purpose of the paper is to present a work-in-progress research on inter-organizational interactions within Russian business clusters. The paper is organized around the following topics. Firstly, we focus on the literature on the subject, including methods by which a business cluster can be identified, the concept of inter-organizational networks in Germany and the IMP network approach as a solid ground to observe networks in which business firms are involved. Secondly, we give a brief overview of the recent developments in the Russian economy which lead to changes in the forms of inter-organizational cooperation in the Russian industrial markets. In particular, there is an evident shift in the attitude towards the cluster concept which has already attracted attention from many governments and businesses since it was first proposed in 1990 by M.Porter. The Russian government and industry organizations have now turned to this concept as a means to improve the competitiveness of one or several specific business sectors and to stimulate regional economic growth. Still, business cluster as a network of relationships has not been yet an object of a serious study in Russia. In order to highlight the structure and sustainability of relationships within cluster and to emphasize the importance of long-term network interactions, an initial case study was carried out by means of in-depth interviews. The results of this pilot study contribute to understanding the formal and informal connections of cluster members and can be useful as a first step leading to further research of Russian business clusters which is now is being planned and will be conducted in 2008-2009.

Keywords: business cluster, network, relationships

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Work-in-Progress Paper

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Introduction

The purpose of the paper is to analyze the case of inter-organizational interactions within Russian business cluster. Nowadays, emerging clusters play an important role in regional development all over the world. The recent development in Russia shows great interest of regional administrations in cluster policy while Federal government tends to pay the main attention to building huge state-private holdings. Actually, even the local authorities oriented at stimulating clustering of local enterprises do not understand the interactive perspective of networking within this self-organizing hybrid form. As a matter of fact, despite the importance to researchers managers and policy makers of how clusters speed up regional development, there is uncertainty and debate about what we know and don't know about inter-organizational interactions within clusters. So, there is a need in more research, especially in Russia. Our research is based on the IMP Group approach: interaction between companies in industrial markets is seen from a relationship perspective (Håkansson & Snehota, 1995), relationship being defined as mutually oriented interaction between two reciprocally committed parties.

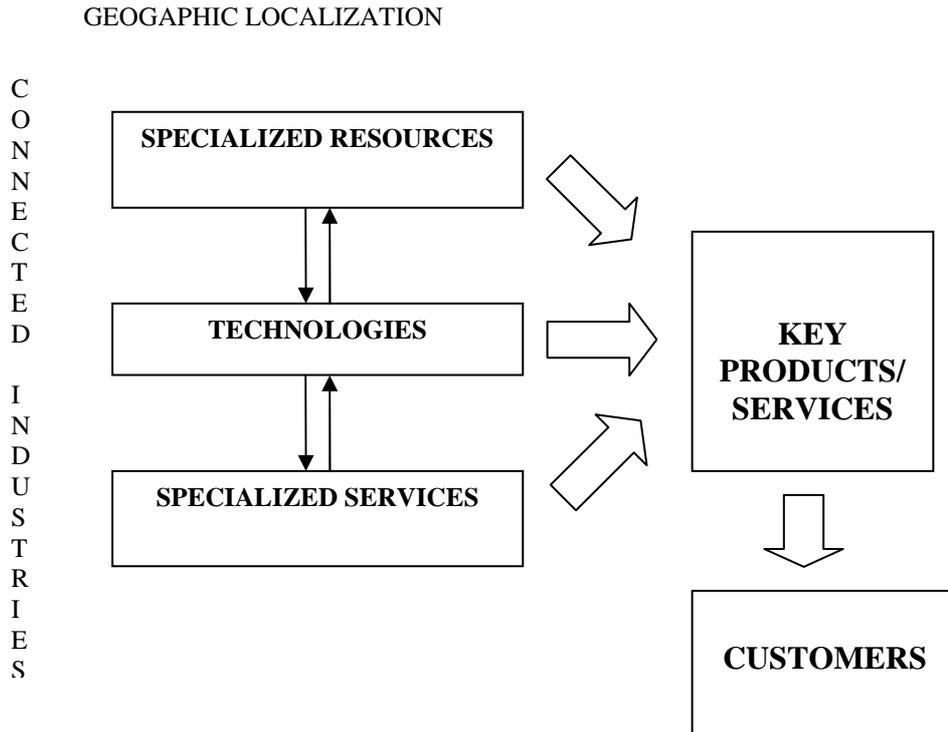
The Main Topics Discussed

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Business Cluster as a Form of Quasi-Integration

It is not a trivial task to define a cluster, in spite of the fact that the initial definition of a business cluster as a geographic concentration of interconnected businesses and associated institutions in a particular field made by M.Porter is widely accepted (Ex.1). There is considerable debate regarding the actual definition of a business cluster (also known as an industry cluster or competitive cluster).

³ As a matter of fact, the underlying concept is much older and dates back to the work of Alfred Marshall (Marshall, 1890).



Ex.1. Overall scheme of business cluster.

Some experts argue that the geographic concentration of SMEs is the only criteria to define business cluster, others look at the whole industry as cluster (especially in Russian literature the word “cluster” is widely used when speaking of industries like “aero-cosmic cluster”, “oil&gas cluster”, “ICT cluster” etc.).

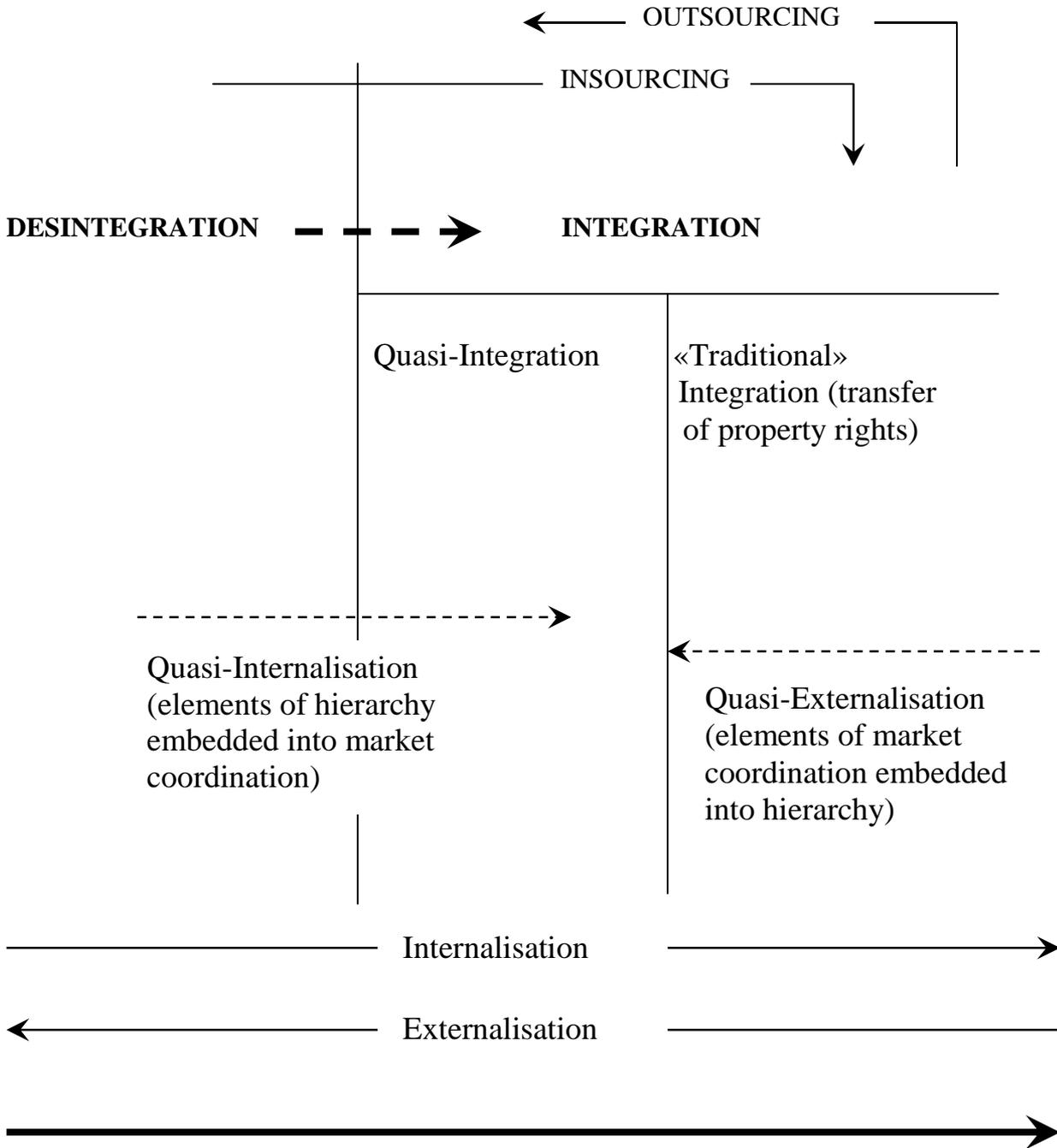
Having network paradigm as a main basis of investigation, we look at these approaches as not adoptable being sure that the main feature of cluster as a *system⁴ of close long-term relationships causing synergy* is not to be ignored when defining business cluster.

Actually, there are lots of industrial districts - localized geographical “urban areas” where enterprises are concentrated and benefit from having their place within such an area where large aggregate demand for a whole range of products and services is a norm. Still, to be at the same territory does not always means to interact closely. Even enterprises from the same (or closely related) industries located in the same place may be far from forming a network where close interactions become one of the main issues of competitiveness.

On the other hand, it is possible that a whole industry of a small country may be a system of close long-term relationships and thus form a real business cluster. Still it is hardly possible in a huge country like Russia where almost every industry is geographically dispersed. In our future research we are going to test this hypothesis and draw a “map” of Russian clusters which probably form some “growth axes” similar to emerging urban corridors in Pacific Asia (Yeung & Lo, 1996). Such axes, visible also in Europe (Dunford, Kafkalas, 1992; Dicken, 2003), are not clusters but *groups of interconnected clusters*.

⁴ A system is a group of elements closely interconnected due to their intensive relationships and interactions. The intensity of relationships and interactions within the system is higher than the intensity of relationships and interactions of its elements with elements outside the system.

In accordance to network paradigm, business cluster should be defined as a specific type of network, “bargaining configuration” (Ruigrok, van Tulder, 1995) of quasi-integrated actors. The idea of quasi-integration (Badot, 2001; Blois, 1972; Dietrich, 1994; Fernandez, Arrunada, Gonzalez, 2000; Jarillo, 1988; Tretyak, 2007) looks like very helpful in our case since it points at the hybrid nature of cluster (see ex.2).



Research rejects the idea that inter-organization are crucial for emerging a cluster of enterprises, especially for maintaining an implicit contract being the main basis of sustainable cluster. From our point of view, **cluster is an inter-organizational network** and could be defined as **a system of explicit and implicit contracts between formally independent localized organizations generating a network of traded and untraded interdependencies which helps to start and maintain a process of cumulative, self-reinforcing development.**

Clusters generate two types of interdependency (Dicken, 2003):

- Traded interdependencies are direct transactions between firms in the cluster (e.g. the supply of specialized inputs of intermediate products and services). In such circumstances, spatial proximity is a means of reducing transaction costs either through minimizing transportation costs or by reducing some of the uncertainties of customer-supplier relationships.
- Untraded interdependencies are the less tangible benefits, ranging from such things as the development of an appropriate pool of labour, to particular kinds of institutions (universities, business associations, government institutions) to broader socio-cultural phenomena. In particular, geographical agglomeration of clustering facilitates three important processes: face-to-face contact; social and cultural interaction; and enhancement of knowledge and innovation.

Defining business cluster as an *inter-organizational network* presumes that the cluster effect is by its nature the network effect (Villarreal Lizzarraga, 2006). Once established, a cluster tends to grow through a process of cumulative, self-reinforcing development based on elaborating of internal norms, regulations, and routines. All the members are embedded in some sustainable framework “examples of interaction” (Doerre, 1997).

Thus, the main questions of our research are:

- What elements (norms, regulations, and routines) are similarly crucial for any sustainable business cluster?
- Are important elements that promote sustainability and efficiency of business cluster similar in different cultures or industries? Is there an emerging global business norm? Or do these elements differ across cultures and/or industries? What is then the Russian specific?
- What is the role and foundations of such factors as trust and fairness in business-to-business relationships within business clusters?
- How many clusters (in terms of inter-organizational networks, not general industrial districts) are there in Russia? Are some clusters interconnected to form “growth axes”? If so, are these axes located within Russian territory or are they “transborder axes”? We are going to test a hypothesis that “transborder business clusters” developing in spite of country borders and simply extending across them in a functionally organized manner are now forming also on Russian borders (for example, on Russian-China border). For this purpose, we take place in an international research project on *Foundations of Fairness in Business-to-Business Relationships* aiming to gather the data needed to conduct cross-cultural analysis.

Business Clusters in Russia

The current decade became a starting point of reconsideration in terms of inter-firm relationships in Russia which now is a fast-growing economy. After all the macroeconomic and political changes of the past decades the infrastructure of the country is finally being formed. Though opportunistic behavior is still widespread being attributed to weak enforcement of contracts, low transparency of legal system, and persisting corruption, Russian companies are now looking to raise value of their investments in the long-term perspective and thus are much more committed to building sustainable relationships (Tretyak, Sheresheva, 2004; Tretyak, 2007; Sheresheva, 2007).

In tendency, tradition to emphasize on optimizing single transactions is step-by-step supplemented with a long-term view. The process is contradictory and inconsistent, with

institutional environment giving Russian enterprises more stimuli to vertical integration than to networking, but still it is evident. Case studies and in-depth interviews carried out in different local industries has shown some specificity of local mindset but at the same time show that Russian managers are much more intended to invest in relationships. They are ready to invest considerable amount of human resource to develop contacts with partners regarding long-term inter-organizational relationships as one of the main factors of success (Tretyak, Sheresheva, 2005; Sheresheva, Gruzdev, 2007).

There is a lot of discussion in Russia if it is necessary to use clusters as a means of raising competitiveness. At present Russian government tends to rely on huge private-state holdings but can not fully ignore the fact that clusters are widely considered to increase the productivity with which companies can compete, nationally and globally. Since cluster development has become a focus for many government programs, and there are many examples of successful business clusters all over the world, Russian authorities begin to consider this form when choosing a way to speed up innovative development.

Being a network, cluster may be either the result of an emergent process or on the other hand the result of an explicit engineering activity of a so-called triggering entity (either a public institution, a single person or a company): "The first involves emergent processes, developing from changes in the environment and a common interest and similar views among potential members. In the second, the process appears to be engineered - a triggering entity actively recruits potential members to join in the consortium." (Doz et al, 2000). In Russia the "governmental design" way is now prevailing: local administrations initiated the process of clustering in St.Petersburg, Zelenograd, Dubna, Samara, Irkutsk, Chelyabinsk, Angarsk, and some other regions.

From our point of view, it makes little sense to speed up clustering if there are no economic motives or goals for the firms to interact. On the other hand, if potential members of cluster have clear motives to elaborate a network of relationships, then clusters (emerged or being established), although different in their formation processes, may show the same characteristics. So the shift to cluster policies on the regional level in Russia may be considered as a clear sign of the recognition that firms inter-related in both direct and indirect ways help to improve the competitiveness of one or several specific business sectors and to stimulate regional economic growth.

Still, business clusters as networks of relationships have not been yet objects of a serious study in Russia. Our research aims to highlight the network nature of this form and thus to help Russian enterprises and local authorities to understand more clear pros and contras of this hybrid form.

Methodology

The main part of this research is considered exploratory. In order to highlight the structure and sustainability of relationships within cluster and to emphasize the importance of long-term network interactions, an initial case study was carried out by means of in-depth interviews. The results of this pilot study contribute to understanding the formal and informal connections of cluster members and can be useful as a first step leading to further research of Russian business clusters which is now is being planned and will be conducted in 2008-2009. This research seeks to shed light on the research questions above.

The first stage of this empirical study draws on the case method (Eisenhardt, 1989; Eisenhardt & Graebner 2007; Flyvbjerg 2006; Yin 1984). As a matter of fact, cases often provides better theoretical insights than multiple-case research based on creating good constructs (Dyer and Wilkins, 1991). The case study approach implies the detailed examination of every single example of a class of phenomena. It allows an investigation to retain the holistic and meaningful characteristics of real-life events, such as organizational and managerial processes. Empirical material will be obtained in the form of in-depth interviews as well as by means of observation and analyzing documents.

On the next stage of the research priority will be placed on identifying a research context suitable for testing our hypotheses and exploring our research questions. We are therefore going to collect data in form of in-depth interviews as well as in form of survey using structured questionnaire. A convenience sampling approach will be used to complete the sample, but it is desirable to investigate business clusters in Russian regions differing along various dimensions. As to the role and foundations of trust and fairness in business-to-business relationships within clusters, a field experiment will be conducted using a conjoint design.

Results to Be Obtained

As a result of gathered data analysis a “map” of Russian clusters will be drawn and probably some “growth axes” in Russia will be revealed. The research will help to recognize what norms, regulations, and routines are crucial for business clusters’ sustainability and efficiency in Russia and to find out if trust and fairness in inter-organizational relationships within clusters are of similar importance (and similarly understood) in Russia and in other cultures. The final research materials will be prepared and published first in Russian and then in English.

References

- Badot O. (2001), "De la quasi-intégration au succursalisme agile: une lecture exploratoire de la distribution contemporaine par la théorie des coûts de transaction", in: **La théorie des coûts de transaction. Regard et analyse du management stratégique**, Joffre, P. & O. Germain (eds.), préface de O. O. Williamson, Coll. Entreprendre-Série Vital Roux, Vuibert, Paris, 217-236.
- Blois K. (1972), "Vertical Quasi-Integration" // **Journal of Industrial Economics**, Vol.20, 253-272.
- Dicken P. (2003), **Global Shift: Reshaping the Global Economic Map in the 21st Century**. 4th Edition. L.; Thousand Oaks, CA; New Dehli: SAGE Publications.
- Dietrich M. (1994), The Economics of Quasi-Integration // **Review of Political Economy**, Vol.6, No.1, 1-18.
- Doerre K. (1997), "Globalisierung – eine strategische Option. Internationalisierung von Unternehmen und industrielle Beziehungen in der Bundesrepublik" // **Industrielle Beziehungen**, Vol.4, Nr.4, 265-290.
- Dunford M., Kafkalas G. (1992), "The Global-Local Interplay, Corporate Geographies and Spatial Development Strategies in Europe", in: Dunford M., Kafkalas G. (Eds.). **Cities and Regions in the New Europe: The Global-Local Interplay and Spatial Development Strategies**. London: Belhaven Press.
- Eisenhardt K. M., Graebner M. E. (2007), "Theory Building from Cases: Opportunities and Challenges", **Academy of Management Journal**, Vol. 50, No.1, 25-32.
- Fernandez A., Arrunada B., Gonzalez M. (2000), "Quasi-Integration in Less-Than-Truchload Trucking", in: **Institutions, Contracts and Organizations. Perspectives from New Institutional Economics**. Ed. By C.Menard. Cheltenham, UK: Edward Edgar, P.294-303.
- Flyvbjerg B. (2006), "Five Misunderstandings About Case-Study Research" // **Qualitative Inquiry**, Vol. 12, No. 2, 219-245.
- Gordon I.R., McCann P. (2000), Industrial Clusters: Complexes, Agglomeration and /or Social Networks // **Urban Studies**, Vol.37, No.3, 513-532.
- Håkansson H., Snehota I. (1995), **Developing Relationships in Business Networks**. London: Routledge.
- Heany D.F., Weiss G. (1983), Integrating Strategies for Clusters of Businesses // **Journal of Business Strategy**, No. 4, 3-11.
- Innovative Clusters: Drivers of National Innovation Systems**. (2002), Paris: OECD.
- Jarillo J.C. (1988), "On Strategic Networks" // **Strategic Management Journal**, Vol.9, No.1, 31-41.
- Marshall A. (1922), **Principles of Economics**. New York, McMillan Publishing Company. (First ed. 1890).
- Navdi K. (1999), **Facing the New Competition: Business Associations in Developing Country Industrial Clusters**. Geneva: ILO International Institute for Labour Studies.
- Porter M. (1990), **The Competitive Advantage of Nations**. New York: Basic Books.
- Rabelotti R., Schmitz H. (1999), The Internal Heterogeneity of Industrial Districts in Italy, Brazil and Mexico // **Regional Studies**, Vol.33, No.2, 97-108.
- Ruigrok W., van Tulder R. (1995), **The Logic of International Restructuring**. London, New York: Routledge.
- Sheresheva M. (2007), "Klastery kak instrument razvitiya regionov", in: **Instituty miestnogo samoupravleniya: problemi stanovleniya I razvitiya**, Moscow: MAK Press.
- Sheresheva M. (2007), **Miezfirmenniye syeti**, Moscow: TEIS.

- Sheresheva M., Gruzdev A. (2007), "Building relationships by a high-tech startup: What are the first steps and the main problems", **Paper presented at the 23th IMP conference**, Manchester.
- Tretyak O., Sheresheva M. (2004), "Developing Relationships with Suppliers in Russia: A network perspective", **Paper presented at the 20th IMP conference, Copenhagen.**
- Tretyak V.P. (2007), **Klastery priedpriaty**. Irkutsk.
- Villarreal Lizzarraga C.L. (2006). **Contribution au pilotage des projets partagés par des PME en groupement basée sur la gestion des risques**. L'Institut National Polytechnique de Toulouse.
- Yeung Y.-m, Lo F.-C. (1996), Global Restructuring and Emerging Urban Corridors, in: Yeung Y.-m, Lo F.-C. (Eds.) **Emerging World Cities in Pacific Asia**. Tokyo: United Nations University Press.
- Yin R. K. (1994), **Case study research: Design and methods**. Sage Publications: London.